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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,710	02/25/2002	Kiran Challapali	US020019	6627

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EXAMINER

SHORTLEDGE, THOMAS E

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,710	CHALLAPALI ET AL.	
	Examiner	Art Unit	
	Thomas E Shortledge	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/14/03, 2/25/02.</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-3, and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (Animated Talking Head With Personalized 3D Head Model), in view of Jockusch et al. (Analysis-By-Synthesis and Example Based Animation With Topology Conserving Neural Nets)

As to claim 1, Chen et al. teach:

a display capable of displaying a talking head (display an animated character or a life-like talking head on the computer screen, page 274);

an audio synthesizer unit (a text-to-speech (TTS) program, page 275);

a processor arranged to control the operation of the audio-visual system (a human-computer interface (page 274), where it is inherent that the computer would contain a processor to control the audio-visual system).

Chen et al. do not teach:

a caricature filter, nor

wherein before the talking head is displayed by the display, the talking head is processed by the caricature filter.

However, Jockusch et al. teach:

a caricature filter, (creating a caricature, col. 1, page 954);

wherein before the talking head is displayed by the display, the talking head is processed by the caricature filter (generating caricatures of the normalized image, to represent image and graphic data for image generation and manipulation, col. 1, page 954 and col.1, page 956).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Chen et al. with the caricature creation of Jockusch et al. to create compact image encoding production for entertainment purposes, as taught by Jockusch et al. (col. 1, page 953).

As to claim 2, Chen et al. teach the talking head is based upon image sample of a subject, (creating personalized talking heads based on the human head, page 275).

As to claim 3, Chen et al. do not teach the caricature filter modifies the image sample to give an appearance of being at least partially synthetic as compared to an original image sample.

However, Jockusch et al. teach creating a caricature of an image where the features of the human face are exaggerated to create the caricature, col. 1, page 954.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Chen et al. with the caricature creation of Jockusch et al. to create compact image encoding production for entertainment purposes, as taught by Jockusch et al. (col. 1, page 953).

As to claim 5, Chen et al. teach a communication unit, (a human computer interface, for communication between a human and computer, page 274).

As to claim 6, Chen et al. teach a speech recognizer and a voice-to-data converter coupled to the processor, (a human computer interface where the human is able to communicate with the computer by carrying on a single conversation, page 274. It would be necessary that human computer interface would contain a speech recognizer and a voice-to-data converter so that the user and computer are able to communicate through speech).

As to claim 7, Chen et al. teach a text-to-audio-visual-speech system (a human computer interface using a text-to-speech system, and display an animated talking head with realistic lip movements synchronized to the speech, page 275).

3. Claims 8,9,15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosatto et al. (6,112,177), in view of Jockusch et al. (Analysis-By-Synthesis and Example Based Animation With Topology Conserving Neural Nets).

As to claim 8, Cosatto et al. teach:

sampling images of a talking head (capturing samples of the subject to generate the libraries for the analysis, col. 5, lines 51-52);

decomposing the sampled images into segments (decomposing the image sample into a hierarchy of segments, col. 6, lines 19-20); and

rendering the talking head image from the segments (creating a talking head from the segments, col. 6, lines 30-32).

Cosatto et al. do not teach applying a caricature filter to the talking head image.

However, Jockusch et al. teach creating a caricature of the talking head, (col. 1, page 954).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Chen et al. with the caricature creation of Jockusch et al. to create compact image encoding production for entertainment purposes, as taught by Jockusch et al. (col. 1, page 953).

As to claim 9, Cosatto et al. teach displaying the caricaturized talking head (displaying the talking head, page col. 5, lines 7-9).

As to claim 15, Cosatto et al. teach:

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displaying a talking head, the talking head being initially formed using images of a subject (a sampled based method for synthesizing talking heads, creating the picture on a computer screen, col. 5, lines 6-8, and lines 46-48).

synthesizing audio (a voice output synchronous with the talking head, col. 5, lines 7-9).

Cosatto et al. do not teach a caricature filter that modifies an appearance of the talking head before the talking head is displayed by the means for displaying, the modified talking head having at least partially an artificial appearance as compared to an unmodified talking head formed using the images of the subject.

However, Jockusch et al. teach generating caricatures of the normalized image, to represent image and graphic data for image generation and manipulation, (col. 1, page 954 and col.1, page 956).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. to create compact image encoding production for entertainment purposes, as taught by Jockusch et al. (col. 1, page 953).

As to claim 18, Cosatto et al. do not teach the caricature filter is automatically applied.

However, Jockusch et al. teaches the caricature filter is automatically applied (col. 1, page 954).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. to create compact image encoding production for entertainment purposes, as taught by Jockusch et al. (col. 1, page 953).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Jockusch et al. as applied to claim 3 above, and further in view of Simon (6,619,860).

As to claim 4, Chen et al. and Jockusch et al. do not teach the caricature filter is selected from the group consisting of watercolor, comic, palette knife, pencil, and fresco type filters.

However, Simon teaches processing an image using filters consisting of those that give the image the appearance of having been hand drawn, sketched, or painted with artist's implements, examples being watercolor, oil painting, sketches, drawing, and pointillist effects, (col. 4, lines 17-27). Simon does not explicitly mention using comic filters, however, Simon teaches the filters found in the software packages such as Adobe Photoshop (col. 4, lines 29-30), where it would be obvious that a comic filter would be contained, to conform with the standards set by Adobe Systems Incorporated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Chen et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to

create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

5. Claims 10-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosatto et al. in view of Jockusch et al. as applied to claims 8 and 15 above, and further in view of Simon.

As to claim 10, Cosatto et al. and Jockusch et al. do not teach applying a watercolor filter to the talking head image.

However, Simon teaches applying a watercolor filter to the image, (col. 4, lines 25-26).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 11, Cosatto et al. and Jockusch et al. do not teach applying a comic filter to the talking head image.

However, Simon teaches applying filters that are part of the software package known as Adobe Photoshop (col. 4, lines 29-30), where it would be obvious that a comic

filter would be contained, to conform with the standards set by Adobe Systems Incorporated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 12, Cosatto et al. and Jockusch et al. do not teach applying a palette knife filter to the talking head image.

However, Simon teaches applying filters that are part of the software package known as Adobe Photoshop (col. 4, lines 29-30), where it would be obvious that a palette knife filter would be contained, to conform with the standards set by Adobe Systems Incorporated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 13, Cosatto et al. and Jockusch et al. do not teach applying a pencil filter to the talking head image.

However, Simon teaches applying pencil filters to an image, (col. 4, lines 19-20).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 14, Cosatto et al. and Jockusch et al. do not teach applying a fresco filter to the talking head image.

However, Simon teaches applying filters that are part of the software package known as Adobe Photoshop (col. 4, lines 29-30), where it would be obvious that a fresco filter would be contained, to conform to the standards set by Adobe Systems Incorporated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Chen et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 16, Cosatto et al. and Jockusch et al. do not teach the caricature filter is selected from the group consisting of watercolor, comic, palette knife, pencil, and fresco type filters.

However, Simon teaches processing an image using filters consisting of those that give the image the appearance of having been hand drawn, sketched, or painted with artist's implements, examples being watercolor, oil painting, sketches, drawing, and pointillist effects, (col. 4, lines 25-27). Simon does not explicitly mention using comic filters, however, Simon teaches the filters found in the software packages such as Adobe Photoshop (col. 4, lines 29-30), where it would be obvious that a comic filter would be contained, to conform with the standards set by Adobe Systems Incorporated.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 17, Cosatto et al. and Jockusch et al. do not teach the caricature filter is selectively applied by the user input.

However, Simon teaches selecting the filter to apply to the image, (col. 4, lines 50-52).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

As to claim 19, Cosatto et al. and Jockusch et al. do not teach the filter applied may be dynamically changed by the user.

However, Simon teaches using filters that are part of the Adobe Photoshop software package (col. 4, lines 27-30), where it would be necessary that the user would be able to change the filter, since adjusting the filter is part of the Adobe Photoshop software package.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the human computer interface of Cosatto et al. with the caricature creation of Jockusch et al. with the image processing techniques of Simon to create more appealing and valued artistic renditions of an image as taught by Simon, (col. 4, lines 3-6 and 13-15).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pelachaud et al. (Multimodal Communication Between Synthetic Agents).

Pelachaud et al. teach dialoging with a synthetic agent, where the agent can be cartoon faces, caricatures, or other non-human animated objects.

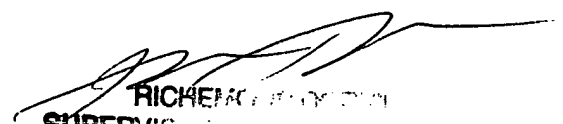
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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E Shortledge whose telephone number is (703)605-1199. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on (571)272-7628. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS
3/22/05


RICHARD J. SMITH
SUPERVISORY PATENT EXAMINER